

CLAIMS:

1. Apparatus for controlling recording of an image of a scene viewed by a person comprising an optical sensor arrangement for simultaneously deriving image segments corresponding with images of a scene seen by the person looking (a) forward of his head and (b) to at least one side of his head, and a detector arrangement for controlling which of said image segments is to be recorded dependent on an estimation of the pointing direction of the eyes of the person.

2. The apparatus of claim 1 wherein the optical sensor arrangement is arranged for simultaneously deriving image segments corresponding with images of scenes seen by the person simultaneously looking to both sides of his head.

3. The apparatus of claim 2 wherein at least a portion of the optical sensor arrangement is adapted to be worn by the person and to turn with turning of the head of the person.

4. The apparatus of claim 2 wherein the optical sensor arrangement includes plural separate sensors arranged to have different fields of view corresponding approximately with scenes the person sees looking forward and to both sides of his head.

5. The apparatus of claim 4 wherein the plural optical sensors are adapted to be worn by the person and to turn with turning of the head of the person.

6. The apparatus of claim 1 wherein the optical sensor

arrangement includes an optical sensor and a reflector arrangement adapted to be turned in response to the control of the detector arrangement.

7. The apparatus of claim 2 wherein the optical sensor arrangement includes (a) a wide-angle lens arranged to have a field of view corresponding with the scene the person sees looking forward of his head and to both sides of his head, and (b) a processor arrangement for selecting only a portion of the wide angle lens field of view in response to the control of the detector arrangement.

8. The apparatus of claim 1 wherein the optical sensor arrangement includes (a) a wide-angle lens arranged to have a field of view corresponding with the scene the person sees looking forward of his head and to at least one side of his head, and (b) a processor arrangement for selecting only a portion of the field of view in response to the control of the detector arrangement.

9. The apparatus of claim 1 further including a recorder adapted to be responsive to the optical sensor arrangement and the detector arrangement for recording the image segments corresponding to the pointing direction of the eyes of the person.

10. The apparatus of claim 9 further including a buffer memory for selectively storing plural sequential images from the simultaneously derived image segments corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head, the buffer memory being adapted to be responsive to the detector arrangement for changing which of the

stored plural sequential images in the buffer memory is transferred to the recorder immediately prior to and subsequent to the head of the person turning, as determined by the detector arrangement.

11. The apparatus of claim 1 wherein the detector arrangement includes a detector for rotation of the head of the person and a processor arrangement coupled with the rotation detector for causing a detected image of the optical sensor arrangement to rotate through a greater angle than the rotation of the head of the person.

12. Apparatus for controlling recording of an image of a scene viewed by a person comprising an optical sensor arrangement including plural optical sensors for images corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head, and a detector arrangement, including a sensor for the rotation of the head of the person, for controlling which of said images is to be recorded.

13. The apparatus of claim 12 wherein the plural optical sensors are arranged to have different fields of view and are arranged for simultaneously deriving the images corresponding with the images of scenes seen by the person looking forward of his head and to at least one side of his head.

14. The apparatus of claim 12 wherein the optical sensor arrangement includes several optical sensors arranged to have different fields of view for simultaneously deriving several images corresponding with images of scenes seen by the person looking forward of his head and to both sides

of his head.

15. The apparatus of claim 12 wherein the plural optical sensors are adapted be worn by the person and to turn with turning of the head of the person.

16. Apparatus for controlling recording of an image of a scene viewed by a person comprising an optical sensor arrangement including a wide angle optical sensor from which image segments having different fields of view can be simultaneously derived, the image segments corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head, and a detector arrangement, including a sensor for rotation of the head of the person, for controlling which of said image segments is to be recorded.

17. The apparatus of claim 16 wherein the wide angle optical sensor is arranged to derive several image segments corresponding with images of scenes seen by the person looking forward of his head and to both sides of his head.

18. The apparatus of claim 16 wherein the wide angle optical sensor is adapted to be worn by the person and the detector arrangement includes a processor adapted to be responsive to the sensor for the extent of rotation of the head of the person for controlling which of said image segments is to be recorded.

19. The apparatus of claim 12 wherein the optical sensor arrangement includes first and second turnable reflectors, the plural optical sensors including first and second

separate optical sensors respectively associated with the first and second turnable reflectors, the optical sensor arrangement being arranged to be responsive to the detector arrangement and the reflectors being arranged to be turned so that (a) at least one of the optical sensors is arranged to be responsive, via the reflector associated therewith, to images corresponding with images of scenes seen by the person looking forward of his head, (b) the first optical sensor is arranged to be responsive, via the first reflector, to images corresponding with images of scenes seen by the person looking to a first side of his head, and (c) the second optical sensor is arranged to be responsive, via the second reflector, to images of scenes seen corresponding with images seen by the person looking to a second side of his head.

20. The apparatus of claim 12 wherein the optical sensor arrangement includes a turnable reflector and first and second optical sensors, the optical sensor arrangement being arranged to be responsive to the detector arrangement and the reflector being arranged to be turned so that (a) at least one of the optical sensors is arranged to be responsive, via the reflector, to images corresponding with images of scenes seen by the person looking forward of his head, (b) the first optical sensor is arranged to be responsive, via the reflector, to images corresponding with images of scenes seen by the person looking to a first side of his head, and (c) the second optical sensor is arranged to be responsive, via the reflector, to images corresponding with images of scenes seen by the person looking to a second side of his head.

21. The apparatus of claim 20 wherein the reflector is

adapted to be turned toward one of the optical sensors and the forward facing direction of the head of the person while the head is directed forward.

22. The apparatus of claim 12 wherein the optical sensor arrangement includes first and second optical sensors positioned so that they have different fields of view so that (a) the first optical sensor is arranged to be responsive to images corresponding with images of scenes seen by the person looking forward of his head, and (b) the second optical sensor is arranged to be responsive to images corresponding with images of scenes seen by the person looking to a first side of his head.

23. The apparatus of claim 12 wherein the optical sensor arrangement includes first, second and third optical sensors positioned so that they have different fields of view so that (a) the first optical sensor is arranged to be responsive to images corresponding with images of scenes seen by the person looking forward of his head, (b) the second optical sensor is arranged to be responsive to images corresponding with images of scenes seen by the person looking to a first side of his head, and (c) the third optical sensor is arranged to be responsive to images corresponding with images of scenes seen by the person looking to a second side of his head.

24. A method of recording an image of scenes viewed by a person by using an optical sensor arrangement that simultaneously derives image segments corresponding with images of scenes seen by the person looking (a) forward of his head and (b) to at least one side of his head, comprising the step of controlling which of said image

segments is recorded in response to an estimate of the pointing direction of the eyes of the person.

25. The method of claim 24 wherein the optical sensor arrangement simultaneously derives image segments corresponding with images of scenes seen by the person simultaneously looking to both sides of his head and the controlling step records one of said images.

26. The method of claim 25 wherein the optical sensor arrangement includes plural separate sensors having different fields of view corresponding approximately with scenes seen by the person looking forward and to both sides of his head.

27. The method of claim 26 wherein the optical sensor arrangement includes a wide-angle lens having a field of view corresponding with scenes seen by the person looking forward of his head and to both sides of his head, the method comprising selecting only a portion of the wide angle lens field of view in response to the control of the detector arrangement.

28. The method of claim 24 further including selectively storing plural sequential images from the simultaneously derived image segments corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head, and changing which of the stored plural sequential images in the buffer memory is transferred to the recorder immediately prior to and subsequent to the head of the person turning.

29. The method of claim 24 further including detecting

rotation of the head of the person and responding to the detected head rotation by causing a detected image of the optical sensor arrangement to rotate through a greater angle than the rotation of the head of the person.

30. A method of recording an image of a scene viewed by a person by using an optical sensor arrangement including plural optical sensors for images corresponding with images seen by the person looking forward of his head and to at least one side of his head, the method comprising selecting one of said images of the sensor arrangement in response to rotation of the head of the person, and recording the selected image.

31. A method of recording an image of a scene viewed by a person by using an optical sensor arrangement including a wide angle optical sensor from which image segments having different fields of view can be simultaneously derived, the image segments corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head, the method comprising selecting one of said images of the sensor in response to rotation of the head of the person, and recording the selected image.

32. Apparatus for controlling recording of an image of a scene viewed by a person comprising an optical sensor arrangement including an optical sensor for images corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head, and a detector arrangement, including a sensor for the rotation of the head of the person, for controlling which of said images is to be recorded, the

optical sensor arrangement including a reflector adapted to be turned in response to rotation of the head, as detected by the detector arrangement.

33. A method of recording an image of a scene viewed by a person by using an optical sensor arrangement including an optical sensor and a reflector, the method comprising directing images corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head to the sensor via the reflector by turning the reflector through an angle dependent on the rotation of the head of the person, and recording the image incident on the sensor.